

1	MISCELLANEOUS	31	..Reciprocating clutch
2 R	HOISTING TRUCK	29 A	.Tie rod tensioner
3 R	.Tilting load support	32	AXLE-LUBRICATING JACK
3 B	..Service station type	33	CAR JOURNAL BOX LIFTING
3 C	..Platform type	34	.Suspended lifter
4 R	.Cable hoist	35	CAR-PUSHER TYPE
4 B	..Service station type	36	.Pinch bar
4 C	..Platform type	37	..Rail clamping
5 R	.Inclined plane or wedge	38	..Pivoted wheel engaging member
5 B	..Service station type	39	DOOR BRACE
5 C	..Platform type	40	PRINTER'S QUOINS
6 R	.Rack and pinion or segment	41	.Screw
6 B	..Service station type	42	.Wedge
6 C	..Platform type	43	RAIL OR TIE SHAFTER
7 R	.Screw	44	.Single throw lever
7 B	..Service station type	45	VEHICLE-BODY LIFTERS
7 C	..Platform type	46	.Lever and drum
8 R	.Single throw lever	47	.Cable hoist
9 R	..Toggle	48	..Vehicle attached drum
9 B	...Service station type	49	.Swinging side bars
9 C	...Platform type	50	..Single fixed pivot
10 R	..Parallelogram bars	50.1	RESILIENT TIRE-CASING SPREADERS
10 B	...Service station type	50.2	.Spreader and tire casing
10 C	...Platform type		relatively movable or
8 B	..Service station type		rotatably mounted
8 C	..Platform type	50.3	.Fluid pressure operated
2 B	.Service station type	50.4	.With tire casing support
2 C	.Platform type	134.3 R	METHOD OR APPARATUS FOR PLACEMENT
10.5	METALLIC SPRING STRETCHER AND/OR		OF CONDUCTIVE WIRE
	COMPRESSOR (E.G., LEAF,	134.4	.By fluid pressure differential
	HELICAL, OR COIL SPRINGS)		in conduit (e.g., parachute
			sucked through conduit)
11	FLOOR JACK TYPE	134.5	.Tractor for pulling wire (e.g.,
12	.Rack and pinion or segment		battery-powered)
13	.Screw	134.6	..Step-by-step type (e.g., by
14	.Step-by-step traveling member		camming against messenger)
15	.Single-throw lever and bar	134.7	.Sectional members for fishing
16	..Sliding bar	134.3 PA	.Utility pole guide
17	.Single throw lever	134.3 CL	.Cable lashing
18	NAIL EXTRACTOR TYPE	134.3 FT	.Conduit snakes
19	.Hammer and anvil	134.3 SC	.Submarine cable
20	.Screw	199	PORTABLE IMPLEMENTS OR APPARATUS
21	.Single throw lever		FOR TENSIONING FLEXIBLE
22	..Lever and pivoted jaw grip		MATERIAL OR FOR EXTRACTING
23	..Multiple jaw grip		STUMPS OR POLES
24	...Cam or wedge actuated	200	.Material comprises resilient
25	..Claw bar		floor covering (e.g., carpet)
26 R	...Hammer	201	..Including fluid or spring
26 E	....Extensible fulcrum		driven cylinder
27	...Pivoted fulcrum member	202	..Including force transmitting
28	STAPLE PULLER		cable and driven, rotatable,
28.5	THILL-COUPLING JACK		cable engaging drum
29 R	PIPE OR ROD JACK		
30	.Lifter		

CLASS 254 IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FORCE

203	..Including driven, rotatable, floor covering engaging and pulling drum	225	..With material or cable contacting infeed guide
204	..Including screw drive	226	...Rotatable pulley wheel element
205	..Including rack and pinion, or pinion segment, drive	227	..With ground-engaging support means
206	..Including ratchet bar and driving pawl drive	228	.Including expandible chamber fluid motor drive
207	...Having plural, disparate, driving pawls	229	.Including worm and worm wheel gear drive
208	..Including rotatable, pulley wheel element and cable	230	.Including rack and pinion, or pinion segment, drive
209	..Including force transmitting, hand held and operated, lever	231	.Including screw drive
210	...With means attached thereto for sequentially, gripping, shifting, and releasing bar component	232	..Plural screws
211	...With floor covering clamping means attached to lever	233	...Having plural, oppositely shifting, threaded riders
212	...Having linearly shifting, guided component attached thereto	234	..Having plural, oppositely shifting, threaded riders
213	.Including rotatably driven drum for engaging either material or force transmitting cable	235	..Having ratchet wheel and pawl for driving screw
214	..Plural drums or drum with plural distinct sections	236	..Having intermeshing gears for driving screw
215	...Juxtaposed to material or cable at single locus	237	.Including ratchet bar and driving pawl drive
216	..Having pressure element spaced therefrom to confine material or cable thereagainst	238	..Having plural, disparate, driving pawls
217	..Having ratchet wheel and interengaging pawl for driving drum	239	...Plural ratchet formations
218	...Pawl pivots about fixed point on drive handle	240	....Facing opposite directions
219	..Having intermeshing gears for driving drum	241	.Including intermeshing gear drive
220	...Worm and worm wheel	242	.Including rotatable, pulley wheel element and cable
221	..With projections or apertures on drum for engagement with complementary formations on material or cable	243	.Including either force transmitting, hand held and operated lever or animal powered sweep
222	..With means for preventing or retarding rotation in at least one direction	244	..Implement or apparatus includes bar component having plural holes and removable cooperating pins selectively engagable by lever
223	...Ratchet wheel or formation and pawl	245	..With means attached thereto for sequentially gripping, shifting, and releasing bar component
224	..With adjustable gripping device for attaching drum to rigid, in situ structure	246	..Having linearly shifting, guided component attached thereto
		247	...With ratchet formation and locking pawl for maintaining relative positioning
		248	..With additional, hand held lever pivotally attached thereto for applying pulling force in opposite direction

249	...Having position locking means between levers	425	..Gear driven
250	..With camming means thereon, and pressure element spaced therefrom to confine material, or force transmitting cable, thereagainst	426	.Cable actuated
251	..With material, article, or force transmitting cable clamping means attached to and shifting with lever	427	.Rack and pinion
252	...Including cooperating, relatively stationary means for intermittently locking material or cable	264	APPARATUS FOR HAULING OR HOISTING LOAD, INCLUDING DRIVEN DEVICE WHICH CONTACTS AND PULLS ON CABLE
253	...Plural clamping means	265	.Device includes driven, flexible, cable contacting belt
254	....Alternately clamping and pulling on material or cable	266	.Device includes rotatably driven, cable contacting drum
255	....Attached by flexible connector	267	..Having rotational speed governor for generating control impulse to rotation retarding means or drive
256	..With material, article, or force transmitting cable engaging means movably attached to and shifting with lever	268	..Having mechanism, actuated by changes in position of drum relative to another component of device, for generating control impulse to rotation retarding means or drive
257	...Including cooperating, relatively stationary means for intermittently locking material or cable	269	..Having stationary mechanism, actuated by load or other obstruction on and traveling with cable, for generating control impulse to rotation retarding means or drive
258	...Plural, movably attached engaging means	270	..Having cable contacted, supported, or attached mechanism for generating control impulse to retarding means or drive
259	....Alternately engaging and pulling on material or cable	271	...With cable contacting component, on or adjacent to circumference of drum, shifted by segment of wound cable
260	....Attached by flexible connector	272	...With cable deflecting or path defining component shifted by cable when tension varies
261	..With means pivotally connected to lever and adapted to engage rigid, in situ structure	273	....Electricity or fluid utilized in transmittal of impulse
262	.Including adjustable gripping device for attaching implement or apparatus to rigid, in situ structure	274	..Having mechanism, linked to drum or rotating element of drive, for generating control impulse to rotation retarding means or motor when torque on drum varies
263	.Including ground engaging means for supporting implement or apparatus in plural, vertically spaced positions	275	...Electricity utilized in transmittal or impulse
84	TRAVERSING JACK	276	..Having mechanism, linked to drum and actuated by number of drum rotations, for generating control impulse to rotation retarding means or drive
85	.Screw		
418	VEHICLE ATTACHED JACK		
419	.Semi-trailer landing gear		
420	.Attached to trailer tongue		
421	.Turntable		
422	.Rocking lever		
423	.Hydraulic or pneumatic		
424	.Screw actuated		

CLASS 254 IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FORCE

277	..With fluid or resilient shock absorbing or tension maintaining means attached to, supported by, or supporting guiding structure for cable	300	.....With frictional brake assembly mechanically linked to, and operationally influenced by, clutch
278	..Plural drums or drum with plural distinct sections	301	.....With additional axially shiftable clutch mechanism mechanically linked to, and operationally influenced by, first clutch
279	...With vehicle for supporting at least one drum	302	.....Alternately transmitting power
280	....Having rotatable, cable guiding, pulley wheel element spaced from drums	303	.....Fluid operated actuator shifts component
281	.....Element repositionable relative to at least one of the drums	304	.....Components having frictional contact surface
282	....Drive for at least one drum includes motor of vehicle	305	.....Truncated cone shaped
283	...Having rotatable, cable guiding, pulley wheel element spaced from drums	306	....Also including ratchet wheel and driving pawl
284	....Element repositionable relative to at least one of the drums	307	.....Plural driving pawls
285	.....Plural elements	308	.....Attached to rotatable disk or shaft
286	....Plural elements	309	....Also including clutch mechanism having rotatable, radially shiftable, power transmitting component
287	...Juxtaposed to cable at single locus	310	....With means for preventing or retarding rotation of one or more drums in at least one direction
288	...With means affixing at least one drum to supporting base and allowing movement between drum and base	311	...Including sprocket wheel and chain in drive
289	....Movement engages or disengages drum from drive	312	...Including power transmitting pulley and rope or belt either in drive or in cable return means
290	...Plural, distinct, drive motors	313	...Including contacting friction wheels having noncollinear axes of rotation in drive
291	....Noncompressible fluid	314	...Including expansible, noncombustible, fluid motor in drive (e.g., air, steam)
292	....Electric	315	...Including noncompressible fluid motor or pump in drive
293	...Each drum having plural, distinct drive sources or discrete drive trains	316	...Including electric motor in drive
294	...Having common drive source or mechanically interlinked drive trains	317	...Including clutch mechanism in drive having coaxial, rotatable, relatively shiftable axially, power transmitting components
295	....Including intermeshing gears in drive	318	.....With frictional brake assembly mechanically linked to, and operationally influenced by, clutch
296	.....Worm and worm wheel	319	.....Components having frictional contact surface
297	.....Epicyclic gear train having sun, intermediate (e.g., planet), and ring gears		
298	.....Shiftable into and out of intermeshing engagement		
299Also including clutch mechanism having coaxial, rotatable, relatively shiftable axially, power transmitting components		

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|-----|---|-----|---|
| 320 |Including ratchet wheel and interengaging driving pawl in drive | 344 | ...Epicyclic gear arrangement including sun, intermediate (e.g., planet), and ring gears |
| 321 |Including means for preventing or retarding rotation of one or more drums in at least one direction | 345 | ...Shiftable into and out of intermeshing engagement |
| 322 |Frictional brake assembly having rotating, wheel structure and shiftable shoe or band | 346 | ...Drive also includes clutch mechanism having coaxial, rotatable relatively shiftable axially, power transmitting components |
| 323 | ..With vehicle for supporting drum | 347 |With frictional brake assembly mechanically linked to, and operationally influenced by, clutch |
| 324 | ...Having arch-shaped body for straddling load | 348 |With additional axially shiftable clutch mechanism mechanically linked to, and operationally influenced by, first clutch |
| 325 | ...Having rotatable, cable guiding, pulley wheel element spaced from drum | 349 |Fluid operated actuator shifts component |
| 326 |Element repositionable relative to drum | 350 |Components having frictional contact surface |
| 327 |Plural elements | 351 |Truncated cone shaped |
| 328 | ...Drive for drum includes motor of vehicle | 352 | ...Drive also includes ratchet wheel and driving pawl |
| 329 | ..With means affixing drum to supporting base and allowing relative movement therebetween | 353 |Plural driving pawls |
| 330 | ...Movement engages or disengages drum from drive | 354 |Attached to rotatable disk or shaft |
| 331 | ...Movement occurs along line collinear with rotational axis of drum during pulling of cable | 355 | ...Drive also includes clutch mechanism having rotatable, radially shiftable, power transmitting component |
| 332 | ...Including pivotal, rotational, or swivel connection between drum and base | 356 | ...With means for preventing or retarding rotation of drum in at least one direction |
| 333 | ..Having pressure element spaced from drum to confine cable thereagainst | 357 |Ratchet wheel or formation and locking pawl |
| 334 | ..Having rotatable, cable guiding, pulley wheel element spaced from drum | 358 | ..Drive includes sprocket wheel and chain |
| 335 | ...Element repositionable relative to drum | 359 | ..Either drive or cable return means includes power transmitting pulley and rope or belt |
| 336 |Plural elements | 360 | ..Drive includes expansible, noncombustible, fluid motor (e.g., air, steam) |
| 337 |Cable supported | 361 | ..Drive includes noncompressible fluid motor or pump |
| 338 | ...Plural elements | 362 | ..Drive includes electric motor |
| 339 | ..Having plural, distinct drive sources or discrete drive trains | 363 | ..Drive includes contacting friction wheels having noncollinear axes of rotation |
| 340 | ...Including two or more motors | 364 | ..Either drive or cable return means includes spring |
| 341 | ..Drive includes rack and either pinion or pinion segment | | |
| 342 | ..Drive includes intermeshing gears | | |
| 343 | ...Worm and worm wheel | | |

CLASS 254 IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FORCE

365	..Drive includes clutch mechanism having coaxial, rotatable, relatively shiftable axially, power transmitting components	383	..With cable guard structure extending partly around and closely adjacent to drum
366	...With frictional brake assembly mechanically linked to, and operationally influenced by, clutch	384	.Including hand held and operated lever with plural cable engaging means movably attached thereto for alternately contacting and pulling on cable
367	...Fluid operated actuator shifts component	385	.With rotatable, cable contacting, pulley wheel element attached to and reciprocated by driving component of device
368	...Components having frictional contact surface	386	..Element reciprocated by expansible fluid motor
369	..Drive includes ratchet wheel and interengaging driving pawl	88	INCLINED PLANE LIFTER
370	..Drive includes clutch mechanism having rotatable, radially shiftable, power transmitting component	89 R	MULTIPLE LIFTERS (E.G., VEHICLE LIFTS)
371	..With means on circumference of drum, or relatively movable drum components, for grasping cable	90	.Track-straddling platform
372	..With projections or apertures on drum for engagement with complementary structural formations on cable	91	.Swinging platform
373	..With pickup or pushing means on circumference of drum for cooperating with structure attached to, or formed on, end of cable	92	.Screw
374	..Having noncircular or varying diameter, cable contacting perimeter	89 H	.Fluid pressure
375	..Including means for preventing or retarding rotation of drum in at least one direction	93 R	FLUID PRESSURE
376	...Ratchet wheel or formation and locking pawl	93 VA	.Vehicle attached
377	...Fluid resistance brake	93 L	.Service station lifts
378	...Frictional brake assembly having rotating, wheel structure and shiftable shoe or band	93 A	.Combined with screw
379	....Having fluid actuator for shifting shoe or band	93 HP	.Inflatable portable bags
380	..With portable housing for drum and hand manipulated means for removably fastening housing to supporting base or load	93 H	.Portable automobile jacks
381	..With structure (e.g., sweep, tree, yoke) adapting drum to be powered by draft animal	94	ROCKING SUPPORTS
382	..Including static receiver spaced from drum for storing pulled cable	95	RACK AND PINION
		96	.Screw pinion
		97	.Geared
		98	SCREW
		99	.Derrick type
		100	.Special engaging feature
		101	..Rocking head or base
		102	.Telescoping screws
		103	.Geared
		104	WEDGE
		105	STEP-BY-STEP TRAVELING BAR
		106	.Clutch actuated
		107	..Multiple driving clutches
		108	.Pawl actuated
		109	..Multiple driving pawls
		110	...Reversing
		111	..Reversing
		112	.Rack and lever
		113	SINGLE THROW LEVER AND BAR
		114	.Sliding bar
		115	..Rack bar and segment
		116	..Adjustable
		117	...Lateral shoe
		118	...Rack bar
		119	.Adjustable

120	SINGLE THROW LEVER	400	...Having axes perpendicular or skewed
121	.Rail or tie lifter		
122	.Lazy tongs	401	...With portable block for elements and hand manipulated means for removably fastening block to support base or load
123	.Lever-supported thrust bar		
124	.Mechanically actuated		
126	..Screw		
127	..Cable	402	...Having portion of block repositionable for insertion or removal of cable or for exposure of elements
128	...Block and tackle		
129	.Adjustable		
130	..Multiple fulcrums		
131	.Special engaging feature	403	...With guard or guide for maintaining cable on elements
131.5	..Fulcrumed fork or shovel		
132	..Root puller type	404	...Including antifriction means for elements
387	LOAD ENGAGING MEMBER AND POWER TRANSMITTING CABLE FOR SHIFTING MEMBER RELATIVE TO STRUCTURE WHICH CONTACTS AND GUIDES MEMBER	405	..With block for element and portion thereof repositionable for insertion or removal of cable or for exposure of element
133 R	SPECIAL ENGAGING ELEMENTS	406	...Portion revolves about axis of rotation of element
134	.Adjustable		
133 A	.Sharing props (nonhydraulic)	407	..With means, or element structure, enabling object or obstruction on cable to bypass or travel over element
388	MEANS SUPPORTED BY, AND MAINTAINING RELATIVE SPACING BETWEEN, LONGITUDINAL RUNS OF AN ENDLESS LOAD MOVING CABLE	408	..With block for element having stationary portion adapted to coact with element to grip cable
389	DEVICE OR MEMBER FOR CONTACTING AND GUIDING MOVING CABLE	409	..With portable block for element and hand manipulated means for removably fastening block to support or load
390	.Including rotatable, cable contacting, pulley wheel element	410	...Fastening means remotely operable or breakaway type
391	..With mechanism for retarding or preventing cable movement or element rotation	411	...With guard or guide for maintaining cable on element
392	..With fluid, shock absorbing or tension restoring mechanism connected thereto	412	...Including antifriction means for element
393	..Plural elements or element with plural cable contacting regions	413	..With means for affixing element to support base and allowing relative movement therebetween
394	...At least two of the elements having noncollinear axes of rotation	414	...Including elastic member
395	....Juxtaposed to cable at single locus	415	...Including pivotal, rotational, or swivel connection
396	....Having juxtaposed elements repositionable relative to one another	416	..With antifriction means for element
397	....Including additional element spaced along cable path	417	.Having cable contacting portion revolving around another component of device
398	....Having one element repositionable relative to another element		
399	....Repositionable element supported by cable (e.g., traveling block)		

CROSS-REFERENCE ART COLLECTIONS

CLASS 254 IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING
FORCE

- 900 CABLE PULLING DRUM HAVING WAVE
MOTION RESPONSIVE ACTUATOR FOR
OPERATING DRIVE OR ROTATION
RETARDING MEANS
- 901 ANTIFRICTION MEANS FOR CABLE
PULLING DRUM
- 902 EITHER DRUM, PULLEY WHEEL
ELEMENT, OR CABLE CONSTRUCTED
FROM SPECIFIC MATERIAL
- 903 YIELDABLE, CONSTANT ENGAGEMENT,
FRICTION COUPLING (E.G., SLIP
CLUTCH) IN DRIVE FOR CABLE
PULLING DRUM

FOREIGN ART COLLECTIONS

FOR CLASS-RELATED FOREIGN DOCUMENTS

DIGESTS

- DIG 1 JACK BASES
- DIG 2 ELECTRIC SCREW JACKS
- DIG 3 JACK HANDLES
- DIG 4 OBJECT ENGAGING HEADS FOR JACKS
- DIG 5 MEANS FOR DEPRESSING FOOT BRAKE
WHEN ADJUSTING SAME
- DIG 6 FLEXIBLE RACK AND PINION
- DIG 7 PRINTERS FORM TRUCKS
- DIG 8 SCREW JACKS, PLURAL SECTION NUT
- DIG 9 VEHICLE-OPERATED LIFT PLATFORM
- DIG 10 TIRE OR RIM EXPANDING OR
CONTRACTING DEVICES
- DIG 11 CABLE DRUM FEED FOR PRESSER
- DIG 12 PAWLS
- DIG 13 VEHICLE RETARDING DRUMS
- DIG 14 ROPE ATTACHMENT
- DIG 15 MOTOR CLAMPS
- DIG 16 AUTOMOBILE TRANSMISSION JACK